

REMARKS

In response to the Office Action dated October 25, 1999 (Paper No. 20), Applicant requests reconsideration of all grounds of rejection.

Claims 1, 2, 4-10, 12-15, 17-19, and 21-55 are pending.

Claims 35-55 have been added. The claims originally presented in the application were amended based on the interview of November 10, 1998 (Paper No. 11), where it was stated that the amendments would overcome the art of record. The present Office Action, however, applies the same references to the claims with the amendments. Applicants amended the claims solely to expedite prosecution, without waiving the right to broader protection by filing a continuation.

Claims 1, 2, 4-10, 12-15, 17-19, and 21-34 have been rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over U.S. Patent No. 3,710,034 to Murry (hereinafter referred to as Murry) in view of U.S. Patent No. 5,315,060 to Paroutaud (hereinafter referred to as Paroutaud).

Applicant's respectfully traverse this rejection for at least the following reasons. Neither Murry nor Paroutaud is analogous art to the claimed invention. There is no proper suggestion to combine Murry and Paroutaud. Neither Murry nor Paroutaud nor the combination disclose every recitation of the claims.

A. Murry and Paroutaud Are Not Analogous Art to the Claimed Invention

Murry and Paroutaud are not analogous art to the claimed invention. The art relevant to a consideration of obviousness is the analogous art. *Wang Lab., Inc. v. Toshiba Corp.*, 993 F.2d 858, 864 (Fed. Cir. 1993). Non-analogous art is too remote to constitute prior art. *In re Clay*,

966 F.2d 656, 658 (Fed. Cir. 1992). Two criteria determine whether a particular reference is analogous art. First, if the reference is within the inventor's field of endeavor, then it is deemed analogous. *Wang*, 993 F.2d at 864; *Clay*, 966 F.2d at 659. Second, if the reference is reasonably pertinent to the particular problem with which the inventor was involved, it is prior art. *Wang*, 993 F.2d at 864; *Clay*, 966 F.2d at 659. As the Federal Circuit held in *Clay*:

A reference is reasonably pertinent if, even though it may be in a different field from that of the inventor's endeavor, it is one which, because of the matter with which it deals, logically would have commended itself to an inventor's attention in considering his problem. Thus, the purposes of both the invention and the prior art are important in determining whether the reference is reasonably pertinent to the problem the invention attempts to solve. If a reference disclosure has the same purpose as the claimed invention, the reference relates to the same problem, and that tact supports use of that reference in an obviousness rejection. An inventor may well have been motivated to consider the reference when making his invention. If it is directed to a different purpose, the inventor would accordingly have had less motivation or occasion to consider it.

966 F.2d at 659.

Thus, to determine whether a particular reference is within the prior art, the court must first determine the inventor's goals and objectives. As stated in the Background and Objects of the Invention, one of the goals and objects of the present invention is to eliminate problems associated with the spatial separation technique for sound reproduction (p.3, l.17 - p.5, l.11). A field of endeavor for the present invention is to avoid the use of the spatial separation technique, among other things. Murry uses a spatial separation technique for recording sound sources so that a multi-dimensional playback can be achieved. The disclosure of Murry is not within the field of endeavor of the present invention, nor is the disclosure pertinent to the problems

addressed by the present invention. Thus, the criteria for analogous art is not present in the disclosure of Murry. Therefore, Murry is not analogous art to the present invention.

Nor is Paroutaud analogous art to the present invention. Another object of the present invention is to provide a system capable of capturing sound from sound sources and replaying the sound on a loudspeaker system, "where each loudspeaker system comprises a plurality of loudspeakers or a plurality of groups of loudspeakers (e.g. loudspeaker clusters) customized for reproduction of specific types of sound sources or group(s) of sound sources. Preferably the customization is based at least in part on characteristics of the sounds to be reproduced by the loudspeaker or based on dynamic behavior or groups of sounds." Specification, p.8, ll.6-8.

Thus, the field of endeavor for the present invention involves reproduction on loudspeaker systems of captured sound(s). The present invention is designed to improve the output of a loudspeaker system(s). Paroutaud, however, is not pertinent to solving these concerns. The invention disclosed in Paroutaud is directed toward eliminating problems associated with conventional loudspeakers. The output means of Paroutaud involve acoustic devices driven by transducers. Paroutaud attempts to eliminate the use of loudspeakers to reproduce the sound.

The disclosure in Paroutaud is not within the field of endeavor of the present invention, nor is it pertinent to the problem with which Applicant is involved. Therefore, Paroutaud is not analogous art to the present invention.

B. There Is No Suggestion to Combine the References

Murry discloses a number of microphones in separate locations in a room. The microphones record all of the sound in the room for play back by stereo speakers in similar

locations in another room. The Murry disclosure describes the process of playing back the recorded sound through speakers to replicate the sound in the original room. This is a spatial separation technique.

Paroutaud, however, specifically teaches that stereo speakers are not desired. "The performance sample passage method permits the faithful recreation of a musical performance without the limiting effect of speakers" (Abstract). "There is no fidelity loss and no noise or distortion is introduced at any time since the sounds are emanating from the instrument transducers themselves, not electronic devices and fiber loudspeakers" (col.3, ll.10-15). "Because actual acoustic musical instruments are driven by the MIDI signal, a 'live' acoustic sound is created" (col.5, ll.25-27). Paroutaud then describes how individual instruments, such as stringed instruments (violins, guitars, etc.), wood winds or brass (clarinets, etc.) and drums, are "played" by this method. Only one loud speaker is disclosed in Paroutaud, apparently for use in replicating vocal input(s). All other outputs in Paroutaud involve transducers operating acoustical instruments. Paroutaud specifically teaches away from using speakers. A person of ordinary skill in the art, looking at the disclosure in Paroutaud, would be led away from combining its teachings with Murry.

Additionally, Murry teaches that each microphone in the recording room receive sound from all of the sound sources in the room. The mixture of sound sources is then played back on speakers. This technique, as mentioned previously, is referred to as spatial separation. Paroutaud, however, teaches that each sound source is separately recorded, but that the signals are fed through mixer 115. The system used in Paroutaud is not designed for the spatial separation technique. One of ordinary skill in the art would not be motivated to combine the

invention of Paroutaud with the invention of Murry. The disclosures of Murry and Paroutaud

teach away from combining the two references.

In *In re Hedges*, 783, F.2d 1038, 1041, 228 USPQ 685, 687, (Fed. Cir. 1986), the U.S.

Court of Appeals for the Federal Circuit stated that “the prior art as a whole must be considered.

The teachings are to be viewed as they would have been viewed by one of ordinary skill.” The

court also stated that “[i]t is impermissible within the framework of section 103 to pick and

choose from any one reference only so much of it as will support a given position, to the

exclusion of other parts necessary to the full appreciation of what such reference fairly suggests

to one of ordinary skill in the art”” (quoting *In re Wesslau*, 353 F.2d 238, 241, 147 USPQ 391,

393 (CCPA, 1965)). The entire disclosure of Murry and Paroutaud must be examined to

determine what the references would suggest to one of ordinary skill in the art. As noted above,

the disclosures of Murry and Paroutaud teach away from combining the two references.

The Office Action has not identified any suggestion in Murry, Paroutaud, or elsewhere

that would lead one of ordinary skill in the art to combine the two references. For at least these

reasons, the claims are patentable over Murry in view of Paroutaud.

C. Murry Does Not Disclose Every Recitation of the Claims

Claims 1, 2, 4-10, 12-14 and 35-55 recite “separately capturing” or “means for separately receiving” sounds produced by a plurality of sound sources. As noted in the Office Action, “Murry does not disclose that the receiving sounds are produced by the plurality of sound sources.” Thus, Murry does not disclose every recitation of claims 1, 2, 4-10, 12-14 and 35-55.

Claims 23-29 recite "each receiving means associated with a single sound source." This recitation is not disclosed in Murry. As noted above, Murry discloses the use of a spatial separation technique to capture sound. Microphones are placed in various locations in a recording room. Each microphone then receives sound from each source in the room, thereby each microphone is associated with a number of sound sources. Murry does not disclose the recitation of "each receiving means associated with a single sound source."

Claims 15-22, 30-34, and 46-55 recite "converting each of the plurality of sounds to an audio signal." Murry does not disclose this recitation. Each sound in Murry is not converted into an audio signal. Rather, all of the sounds received by a microphone are converted into an audio signal. Therefore, Murry does not disclose at least this recitation of the claims.

Claims 35-55 recite "designating each of the plurality of received sounds based on one or more of the sonic characteristics." There is no disclosure of any type of designation based on sonic characteristics in Murry. Therefore, Murry does not disclose at least this recitation of the claims.

D. Paroutaud Does Not Disclose Every Recitation of the Claims

Paroutaud discloses a line 96 to couple microphones 112 to Multi-Track Storage 113, a line 21 to connect Data Extractor 117 to MIDI Converter 118, and a line 24 to connect Transducer Drivers 120 to Multi-Track Amplifier/Mixer 115. Each line is a single line, as Paroutaud refers to both a line (*i.e.* a single line), for example, line 26 (col. 7, 1.4), and lines (*i.e.* multiple lines), for example, lines 25 (col. 7, 1.11). If audio signals are to be simultaneously transmitted across a line, the audio signals would have to mix. Claims 1, 2, 4-10, 12-14, 19, 21-

29, 33-45, and 49-55 of the present invention recite "without mixing the audio signals."

Therefore, at least this recitation is not disclosed in Paroutaud.

Claims 23-34 recite audio signals which act separately and simultaneously. Claims 23 and 26 recite "simultaneously and separately storing" audio signals. Claims 24 and 31 recite "simultaneously and separately retrieving" audio signals. Claims 25, 28, 32, and 34 recite "simultaneously and separately amplifying" audio signals. Claim 27 recites "reading the stored audio signals from the recording medium separately." Claim 29 recites "simultaneously amplifying" audio signals. Claim 30 recites "simultaneously and separately recording" audio signals. Claim 33 recites "simultaneously and separately transmitting" audio signals. If audio signals in Paroutaud are transmitted through the system simultaneously, the audio signals mix when using a single line. Therefore, if the signals in Paroutaud act simultaneously, this disclosure will not meet the claim recitation of "without mixing audio signals."

Additionally, Paroutaud discloses a Multi-Track Amplifier/Mixer 115. The audio signals are transmitted through the Amplifier/Mixer 115 to a plurality of outputs. As stated above, the claimed invention does not mix the audio signals. Thus, Paroutaud does not disclose this recitation of the claims.

Nor does Paroutaud disclose a dynamic control means, as recited in claims 1, 2, 4-10, 12-15, 17-19, and 23-28. The Office Action asserts that automatic tracking/extraction device 117 is "a dynamic controller for individually controlling the relative amplitude of the separate audio signals for a given power level based on predetermined criteria." There is no disclosure in Paroutaud of dynamically controlling the relative amplitude of separate signals. Data extractor 117 extracts multi-track pitch/frequency/performance data. (Col. 6, lines 12-13). Further, it

appears data extractor 17 may extract individual instruments. (Col. 2, lines 30-31). None of these disclosures describe a dynamic controller "for individually controlling the relative amplitude of the separate audio signals for a given power level based on predetermined criteria."

Therefore, Paroutaud does not disclose this recitation of the claims.

Claims 35-55 recite "designating each of the plurality of received sounds based on one or more of the sonic characteristics." There is no disclosure of any type of designation based on sonic characteristics in Paroutaud. Therefore, Paroutaud does not disclose at least this recitation of the claims.

Telephone Interview

In a telephone conversation on or about Monday, July 29, 1999, the Examiner and applicant's representative discussed the status of the patent application in preparation for a meeting between Applicant and potential investors. The Examiner stated that U.S. Patent No. 5,212,733, issued on May 18, 1999, to DeVitt et al. ("DeVitt") may be relevant to the present application. Applicant respectfully submits that DeVitt does not describe or render obvious the claimed invention.

DeVitt does not disclose every recitation of the claims. By way of example, in the context of claim 1, DeVitt does not disclose "separate amplifier means for separately amplifying each of the separate audio signals," or "separate loudspeaker means for reproducing the separately amplified audio signals." Further, DeVitt does not disclose "a dynamic control means for individually controlling the relative amplitude of the separate audio signals for a given power level based on predetermined criteria." The recitations are found in the other independent

claims. Therefore, for at least these reasons, DeVitt does not describe or render obvious the claimed invention.

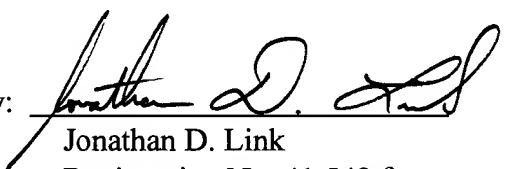
CONCLUSION

In view of the foregoing, the application is believed to be in condition for allowance and notification thereof is respectfully requested. Should any outstanding issues remain, the Examiner is invited to telephone the undersigned at 202-955-1869.

Respectfully submitted,

HUNTON & WILLIAMS

Dated: January 27, 2000

By: 

Jonathan D. Link
Registration No. 41,548 for:
James G. Gatto
Registration No. 32,694

Hunton & Williams
1900 K Street, N.W., Suite 1200
Washington, D.C. 20006-1109
(202) 955-1500